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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP 100 GALLERIA PARKWAY, NW STE 1750 ATLANTA, GA 30339-5948				
			EXAMINER	
			ARANCIBIA, MAUREEN GRAMAGLIA	
			ART UNIT	PAPER NUMBER
			1763	

DATE MAILED: 08/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/784,697

Applicant(s)

MARTIN ET AL.

Examiner

Maureen G. Arancibia

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 May 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-7,9-11 and 16-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-7,9-11 and 16-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8 May 2006 has been entered.

Claim Objections

2. **Claim 7 is objected to because of the following informalities:** there is no period at the end of the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. **Claims 1, 2, 4-7, 9-11, and 23-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

Claim 1 recites the limitation "the creation of the plasma" in Line 5. There is insufficient antecedent basis for this limitation in the claim, since the claim does not recite any sort of plasma creation means. Claims 2, 4-7, 9-11, and 23-25 are rejected due to their dependence on Claim 1. Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 1, 2, 4-7, 9-11 and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 4,950,376 to Hayashi et al. in view of U.S. Patent 5,279,669 to Lee.**

Hayashi et al. teaches an apparatus for dry etching a substrate (Figure 1), comprising: a plasma reactor 15 for containing a plasma; a mechanical support 16 isolated from the creation of the plasma (Figure 1); and an additional structure 30 capable of being electrically biased (Column 5, Lines 57-58), the additional structure disposed within the plasma reactor proximal to the mechanical support (Figure 1), at least a portion of the additional structure extending into the plasma at a time when the plasma reactor contains the plasma (Column 3, Lines 9-12).

In regards to Claims 1, 2, and 4, Hayashi et al. teaches that the additional structure 30 is dc electrically biased (Column 5, Lines 57-58). *Hayashi et al. teaches that the dc electrical bias is provided by a pair of positive and negative variable bias power sources 34. (Figure 1; Column 5, Line 57 - Column 6, Line 5)*

Hayashi et al. does not expressly teach a pulse waveform power source adapted to electrically bias the additional structure to direct electrons from the plasma towards the substrate, or that the additional structure can be both ac and dc electrically biased.

Lee teaches that an additional structure 60 can be ac electrically biased by a *variable* pulse waveform power source 64 that alternately attracts negatively and positively charged particles towards the substrate. (Column 6, Line 50 - Column 7, Line 25)

It would have been obvious to one of ordinary skill in the art to modify the additional structure taught by Hayashi et al. to be both ac and dc electrically biased by adding a variable pulse waveform power source connected to the additional structure, as taught by Lee. The motivation for doing so, as taught by Lee (Column 6, Line 50 - Column 7, Line 25), would have been to generate a pulsed charged-particle beam with a desired base voltage.

The Examiner notes that the structure of Hayashi et al. includes a *positive variable* dc electrical bias power source coupled to the additional structure. This positive dc electrical bias power source would provide a positive base line for the ac pulse waveform power source provided by Lee, and the combination of the positive variable dc electrical bias and the ac pulse waveform would be structurally capable of directing electrons from the plasma towards the substrate. During the positive swing of the pulse waveform power source, negative particles, including electrons, would be directed to the substrate to perform etching, while during the negative swing of the pulse waveform power source, positive particles would be directed to the substrate. See Lee, Column 6, Line 50 - Column 7, Line 25. Since both the positive dc electrical bias power source taught by Hayashi et al. and the ac pulse waveform power source taught by Lee are *variable* power sources, the combination of the two power sources would be

structurally capable of being set at sufficient voltage so as to provide sufficient energy for the electrons to etch material from the substrate.

While the combination of Hayashi et al. and Lee does not expressly state that the apparatus is used for *low-damage anisotropic electron* dry etching, *the apparatus taught by the combination of Hayashi et al. and Lee is structurally the same as the claimed apparatus*, and would be structurally capable of performing low-damage anisotropic electron dry etching.

It has been held that claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function (*In re Danly*, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959)), and that a claim containing a “recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus” if the prior art apparatus teaches all the structural limitations of the claim (*Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987)).

In regards to Claim 5, Hayashi et al. teaches that the mechanical support is electrically isolated from the plasma creator by insulation 17. (Column 5, Lines 4-8)

In regards to Claim 6, Hayashi et al. teaches that the additional structure is electrically isolated from the mechanical support and the plasma creator by electrically insulating member 32. (Figure 1; Column 5, Lines 51-56)

In regards to Claims 7 and 9, see the discussion of Claims 2 and 4 above.

In regards to Claims 10 and 11, the apparatus taught by Hayashi et al. includes an electrically insulating member 32 disposed on and circumscribing a portion of the

mechanical support, and in communication with the additional structure. (Figure 1; Column 5, Lines 51-56)

In regards to Claims 23-25, the pulse waveform taught by the combination of Hayashi et al. and Lee cycles between a positive and negative potential to direct particles of alternating charge to the substrate. This pulse waveform would be capable of directing enough ions of one charge towards the substrate to neutralize an existing charge on the substrate, without damaging the substrate, based on the voltage and timing settings of the bias power sources.

Moreover, as discussed above, the voltage supplied to the additional structure by the combination of the positive dc bias power source of Hayashi et al. and the pulse waveform power source of Lee is variable. The apparatus of Hayashi et al. and Lee would be structurally capable of providing a positive potential such that electrons with kinetic energy less than 100 electron-volts reach the substrate to perform etching, based on the voltage settings of the power sources. Again, it has been held that claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function (*In re Danly*, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959)), and that a claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim (*Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987)).

7. Claims 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi et al. in view of U.S. Patent 6,231,777 to Kofuji et al. (from Applicant's IDS)

The Examiner notes in regards to Claim 16 and its dependent Claims 17-22 and 26, that it appears that Applicant has invoked the provisions of 35 U.S.C. 112, 6th Paragraph. The "means plus function" language of the claims has been interpreted in accordance with the written description in the Specification. Specifically, the "plasma creation means" recited in Lines 4-5 of Claim 16 has been interpreted as referring to any of the art-recognized equivalent plasma generating structures disclosed by Applicant (i.e. capacitive, inductive, microwave, etc.; Specification, Paragraph 51). The "electron etcher means" recited in Lines 8-10 of Claim 16 has been interpreted as referring to the pulse waveform power source connected to the substrate holder. (Specification, Paragraphs 58-59) The "charged particle controller means" recited in Lines 11-14 of Claim 16 has been interpreted as referring only to the additional structure 14 (Figure 3), not to the pulse waveform power source adapted to bias the additional structure (Specification, Paragraph 60), since the pulse waveform power source adapted to bias the "charged particle controller means" is explicitly recited in Claim 19.

In regards to Claim 16, Hayashi et al. teaches an apparatus for dry etching a substrate (Figure 1), comprising: a plasma reactor 15; a plasma creation means (microwaves, waveguide 12, and gas from inlet 14) at least partially disposed within the plasma reactor (the microwaves and gas enter the reactor) for creating a plasma having positively charged ions and electrons (Column 3, Lines 3-8); a substrate holder 16

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disposed within the plasma reactor for receiving a substrate 33, wherein the holder is isolated from the creation of the plasma in chamber 11 (Figure 1); and a charged particle controller means (additional structure 30), the charged particle controller means disposed proximal to the substrate holder (Figure 1).

Hayashi et al. further teaches that the substrate holder 16 is dc electrically biased (Column 5, Lines 11-13). *Hayashi et al. teaches that the dc electrical bias is provided by a pair of positive and negative variable bias power sources 21. (Figure 1; Column 5, Lines 11-19)*

Hayashi et al. does not expressly teach an etcher means (pulsed electrical bias power source) in electrical communication with the substrate holder.

Kofuji et al. teaches that an etcher means (pulsed electrical bias power source) is in electrical communication with a substrate holder. (Column 11, Lines 24-38) Kofuji expressly teaches that electrons are drawn to the substrate during the positive swing of the pulsed electrical bias. (ex. Column 2, Lines 29-52)

It would have been obvious to one of ordinary skill in the art to modify the apparatus taught by Hayashi et al. to include an etcher means (pulsed electrical bias power source in electrical communication with the substrate holder. The motivation for doing so, as taught by Kofuji et al. (Column 11, Lines 34-38), would have been to avoid notching and charge build-up on the substrate during etching.

The Examiner notes that the structure of Hayashi et al. includes a *positive variable* dc electrical bias power source coupled to the substrate holder. This positive dc electrical bias power source would provide a positive base line for the ac pulse

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waveform power source provided by Kofuji et al., and the combination of the positive variable dc electrical bias and the ac pulse waveform would be structurally capable of directing electrons from the plasma towards the substrate. During the positive swing of the pulse waveform power source, negative particles, including electrons, would be directed to the substrate to perform etching, while during the negative swing of the pulse waveform power source, positive particles would be directed to the substrate. Again, Kofuji et al. expressly teaches that electrons are drawn to the substrate during the positive swing of the pulsed electrical bias. (ex. Column 2, Lines 29-52) Since the positive dc electrical bias power source taught by Hayashi et al. is a *variable* power source, the combination of the two power sources of Hayashi et al. and Kofuji et al. would be structurally capable of being set at sufficient voltage so as to provide sufficient energy for the electrons to etch material from the substrate.

While the combination of Hayashi et al. and Kofuji et al. does not expressly state that the apparatus is used for *low-damage anisotropic electron* dry etching, *the apparatus taught by the combination of Hayashi et al. and Kofuji et al. is structurally the same as the claimed apparatus*, and would be structurally capable of performing low-damage anisotropic electron dry etching.

The Examiner also notes that the claims do not exclude additional etching performed by other (i.e. positive or neutral) particles, and indeed require that positive particles are drawn to the substrate during the negative swing of the electrical bias to neutralize the charge build-up on the substrate, just as taught by Kofuji et al. (ex. Column 2, Lines 29-52) This rejection is based on the fact the apparatus structure

taught above has the inherent capability of being used in the manner intended by the Applicant. When a rejection is based on inherency, a rejection under 35 U.S.C. 102 or U.S.C. 103 is appropriate. (See *In re Fitzgerald* 205 USPQ 594 or MPEP 2112).

Additionally, Hayashi et al. teaches that the charged particle controller means (additional structure 30) is dc electrically biased (Column 5, Lines 57-58). *Hayashi et al. teaches that the dc electrical bias is provided by a pair of positive and negative variable bias power sources 34. (Figure 1; Column 5, Line 57 - Column 6, Line 5) The positive variable dc electrical bias power source would be structurally capable of controlling the flux of charged particles from a plasma passing through it to a substrate 33 disposed on the substrate holder 16 (See Column 2, Lines 60 - Column 3, Line 26), and causing the flux to have sufficient energy for the electrons to etch material from the substrate, based on the voltage settings of the positive variable dc electrical bias power source.*

It has been held that claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function (*In re Danly*, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959)), and that a claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim (*Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987)).

In regards to Claim 17, the charged particle controller means (additional structure 30) taught by Hayashi et al. is controllably electrically biased by positive and negative variable electrical bias power sources 34 (Column 4, Lines 11-20; Column 5, Lines 57-

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58), which would be structurally capable of controlling the energy of charged particles being impacted on the substrate, based on the voltage settings for the variable dc power source.

It has been held that claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function (*In re Danly*, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959)), and that a claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim (*Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987)).

In regards to Claim 18, Hayashi et al. teaches a charged particle blocking means (insulating member 32; Figure 1). This insulating member would be structurally capable of preventing charged particles in the plasma from reaching the substrate unless the charged particles pass through the charged particle controller means, due to its position and insulative properties.

It has been held that claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function (*In re Danly*, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959)), and that a claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim (*Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987)).

8. Claims 19-22 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi et al. in view of Kofuji et al. as applied to claim 16 above, and further in view of Lee et al.

The teachings of Hayashi et al. and Kofuji et al. were discussed above.

Hayashi et al. teaches that the additional structure 30 is dc electrically biased (Column 5, Lines 57-58). *Hayashi et al. teaches that the dc electrical bias is provided by a pair of positive and negative variable bias power sources 34. (Figure 1; Column 5, Line 57 - Column 6, Line 5)*

The combination of Hayashi et al. and Kofuji et al. does not expressly teach a pulse waveform power source adapted to electrically bias the charged particle controller means (additional structure) to direct electrons from the plasma towards the substrate.

Lee teaches that an additional structure 60 can be ac electrically biased by a *variable* pulse waveform power source 64 that alternately attracts negatively and positively charged particles towards the substrate. (Column 6, Line 50 - Column 7, Line 25)

It would have been obvious to one of ordinary skill in the art to modify the additional structure taught by Hayashi et al. and Kofuji et al. to be both ac and dc electrically biased by adding a variable pulse waveform power source connected to the additional structure, as taught by Lee. The motivation for doing so, as taught by Lee (Column 6, Line 50 - Column 7, Line 25), would have been to generate a pulsed charged-particle beam with a desired base voltage.

The Examiner notes that the structure of Hayashi et al. includes a *positive variable* dc electrical bias power source coupled to the additional structure. This positive dc electrical bias power source would provide a positive base line for the ac pulse waveform power source provided by Lee, and the combination of the positive variable dc electrical bias and the ac pulse waveform would be structurally capable of directing electrons from the plasma towards the substrate. During the positive swing of the pulse waveform power source, negative particles, including electrons, would be directed to the substrate to perform etching, while during the negative swing of the pulse waveform power source, positive particles would be directed to the substrate. See Lee, Column 6, Line 50 - Column 7, Line 25. Since both the positive dc electrical bias power source taught by Hayashi et al. and the ac pulse waveform power source taught by Lee are *variable* power sources, the combination of the two power sources would be structurally capable of being set at sufficient voltage so as to provide sufficient energy for the electrons to etch material from the substrate.

It has been held that claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function (*In re Danly*, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959)), and that a claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim (*Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987)).

In regards to Claims 20-22 and 26, the pulse waveform taught by the combination of Hayashi et al. and Lee as supplied to the additional structure cycles between a positive and negative potential to direct particles of alternating charge to the substrate. This pulse waveform would be capable of directing enough ions of one charge towards the substrate to neutralize an existing charge on the substrate, without damaging the substrate, based on the voltage and timing settings of the bias power sources.

Moreover, as discussed above, the voltage supplied to the additional structure by the combination of the positive dc bias power source of Hayashi et al. and the pulse waveform power source of Lee is variable. The apparatus of Hayashi et al. and Lee would be structurally capable of providing a positive potential such that electrons with kinetic energy less than 100 electron-volts reach the substrate to perform etching, based on the voltage settings of the power sources. Again, it has been held that claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function (*In re Danly*, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959)), and that a claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim (*Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987)).

Response to Arguments

9. Applicant's arguments (see Pages 9-10 of the reply filed 8 May 2006) with respect to the rejection under 35 U.S.C. 112, first paragraph, have been fully considered and are persuasive. The Examiner also notes in this regard that further support for the amendments to the claims filed 18 November 2005 is found in the Figures, which illustrate the disclosed power supplies connected to *both* the mechanical support and the additional structure. The rejection under 35 U.S.C. 112, first paragraph, has been withdrawn.

10. Applicant's arguments remaining arguments filed 8 May 2006 have been fully considered but, to the extent to which they still apply, they are not persuasive.

Namely, in regards to Applicant's arguments against the teachings of Hayashi et al., Lee, and Kofuji et al., the Examiner responds that the rejection over the cited references is not based on inherency *per se*, but rather on the *structural capability* of the apparatus taught by the combination of Hayashi et al. with Lee and/or Kofuji et al. to perform the recited intended use of low-damage anisotropic electron dry etching, including the recited intended use of the pulse waveform power sources coupled to the mechanical support and/or the additional structure in order to direct electrons from the plasma to the substrate with sufficient energy to etch material from the substrate. This basis of the rejection is now more clearly articulated and explained in the rejections above. As discussed above, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art

structure is capable of performing the intended use, then it meets the claim. The Examiner notes that the functional limitations of the claims have not been disregarded, as asserted by Applicant, but rather have been fully considered, and determined to *not* result in a structural difference between the claimed invention and the cited prior art. As a specific example, the *positive* dc electrical bias power sources taught by Hayashi et al., and the fact that these power sources are of *variable voltage*, and thus capable of being adapted to provide a desired amount of energy to the electrons in the plasma, that makes the apparatus taught by the combination of Hayashi et al. with Lee and/or Kofuji et al. structurally capable of biasing the substrate holder and the additional structure so as to direct electrons to the substrate with sufficient energy to etch material from the substrate. Again, the Examiner's position in this regard is fully set forth in the rejection above.

In so far as Applicant argues that the teachings of Lee are not applicable, since Lee teaches that electrons are confined in the plasma rather than used to etch the substrate (Applicant's reply, Page 13, third paragraph), the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

In response to Applicant's argument that the Examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon

hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the Applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maureen G. Arancibia whose telephone number is (571) 272-1219. The examiner can normally be reached on core hours of 10-5, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on (571) 272-1435. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Maureen G. Arancibia
Patent Examiner
Art Unit 1763



Parviz Hassanzadeh
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